

Viral Hepatitis in Fulton County, 2010—2015

Fulton County Department of Health & Wellness



To promote,
protect
and assure
the health
and wellness
of the people of
Fulton County.

Viral hepatitis is the inflammation of the liver caused by a virus. The most common types are Hepatitis A, Hepatitis B and Hepatitis C. These three viruses are spread in different ways but cause similar illness. Hepatitis A is an acute illness. Hepatitis B and Hepatitis C can be either acute (short-term) or chronic (long-term) illnesses. The number of acute Hepatitis A and Hepatitis B cases have been declining in United States, mostly due to the availability of Hepatitis A and Hepatitis B vaccines. Currently, there is no vaccine for Hepatitis C. According to the Centers for Disease Control and Prevention, in the United States, an estimated 850,000 to 2.2 million Americans are living with chronic Hepatitis B and 2.7 to 3.9 million are living with chronic Hepatitis C. These chronic diseases are more common than HIV/AIDS in the United States.

This report presents surveillance data on Hepatitis A, Hepatitis B and Hepatitis C infections in Fulton County from 2010– 2015. The data is based on the number of cases reported to the Fulton County Department of Health and Wellness, and may not reflect the true infection rate in the county.

HEPATITIS A

• **Cause:** Hepatitis A Virus (HAV)

• **Illness and Treatment:** Onset is usually abrupt with fever, nausea, and abdominal pain followed by jaundice. Some cases may be asymptomatic, particularly pediatric cases. Hepatitis A appears only as an acute or newly occurring infection and does not become chronic. HAV treatment is supportive. Almost all cases recover without any severe consequences.

• **Transmission:** HAV infection is primarily transmitted by the fecal-oral route, by either person-to-person or through consumption of contaminated food or water. Bloodborne transmission is very rare.

• **Risk Factors:** Although anyone can get Hepatitis A, certain individuals or groups are at increased risk. These individuals or groups include people who live with another person with Hepatitis A, people who live, travel or work in regions with high rates of Hepatitis A (e.g., Asia and South or Central America), and men who have sexual contact with other men.

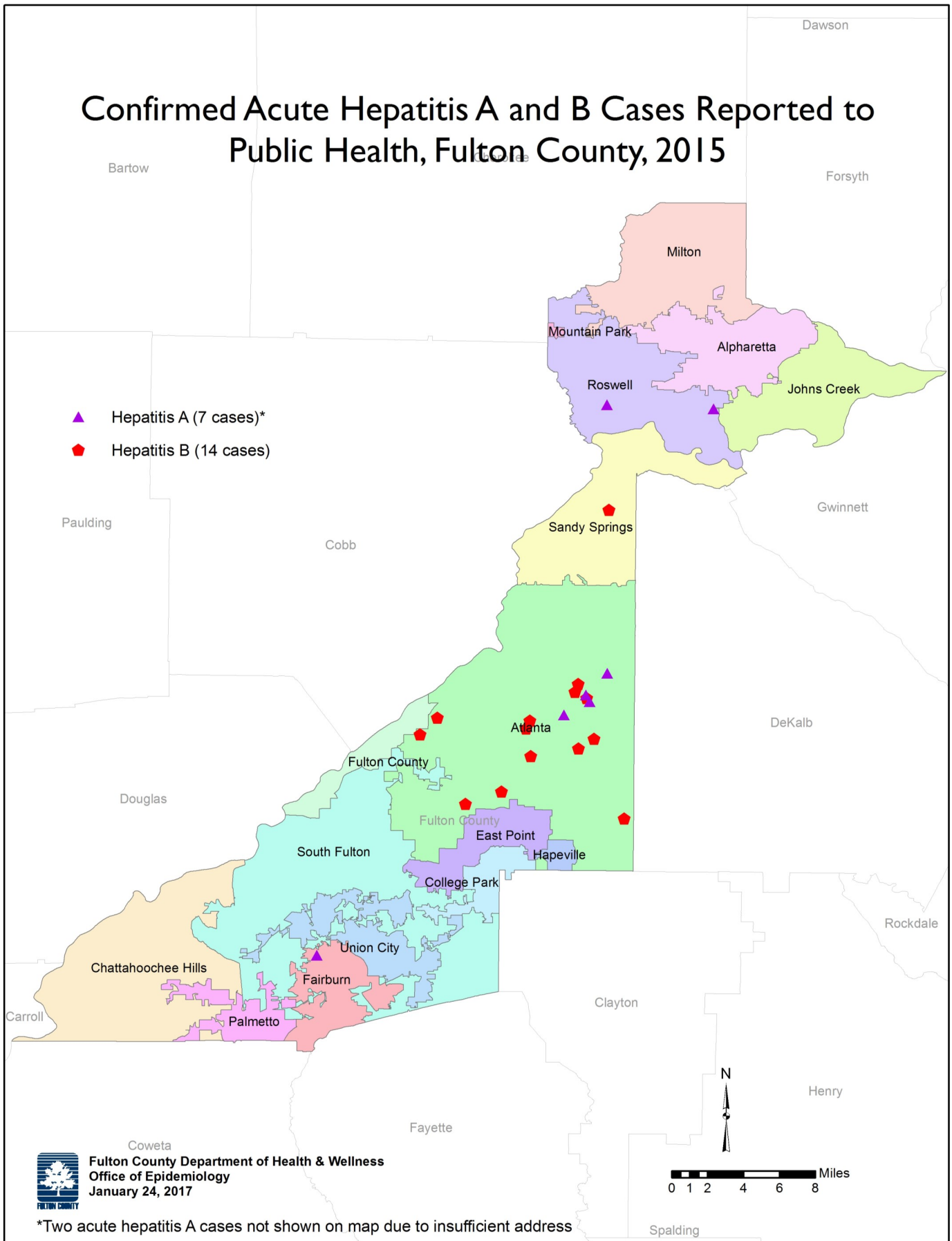
Table 1. Gender, age and race of acute Hepatitis A cases in Fulton County, by year of onset of illness, 2010 – 2015.

Year	2010	2011	2012	2013	2014	2015	Total
Gender							
Male	3	1	5	1	1	5	16
Female	0	0	3	3	1	4	11
Age (Years)							
Range	22-80	39	25-68	38-59	42-60	23-88	22-88
Mean	45.33	39.00	46.38	48.50	51.00	42.22	45.41
Age Groups (Years)							
<15	0	0	0	0	0	0	0
15-39	2	1	2	2	0	6	13
>40	1	0	6	2	2	3	14
Race							
African American	0	0	2	1	0	3	6
White	2	1	5	2	1	5	16
Other/UNK	1	0	1	1	1	1	4

• **Prevention:** Hepatitis A vaccination is the most effective preventive measure against HAV. The vaccine is recommended for all children at age one, certain international travelers, and others at risk for HAV infection. Good hygiene (e.g., hand washing) is another important measure to prevent HAV infection.

The Hepatitis A vaccine is recommended for all children at age one, certain international travelers and others at risk for HAV infection.

Figure I. Map of acute Hepatitis A and acute Hepatitis B cases in Fulton County, 2015.



HEPATITIS B

- **Cause:** Hepatitis B Virus (HBV)

- **Illness and Treatment:** Hepatitis B is a contagious liver disease that results from HBV infection. Hepatitis B infection can be either “acute” or “chronic.”

Acute Hepatitis B virus infection: a short-term illness that occurs within the first 6 months after exposure to the virus. Not everyone will show signs and symptoms for acute Hepatitis B, especially young children. Symptoms for acute infection include fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored stool, joint pain, and jaundice (yellow color in the skin or the eyes). Symptoms can appear anytime between 6 weeks and 6 months after exposure.

Most people with acute Hepatitis B infection recover with no lasting liver damage. Approximately 6%-10% of the people with acute Hepatitis B will develop chronic Hepatitis B infection. However, the younger the person is when infected with Hepatitis B, the greater his or her chance of developing chronic infection.

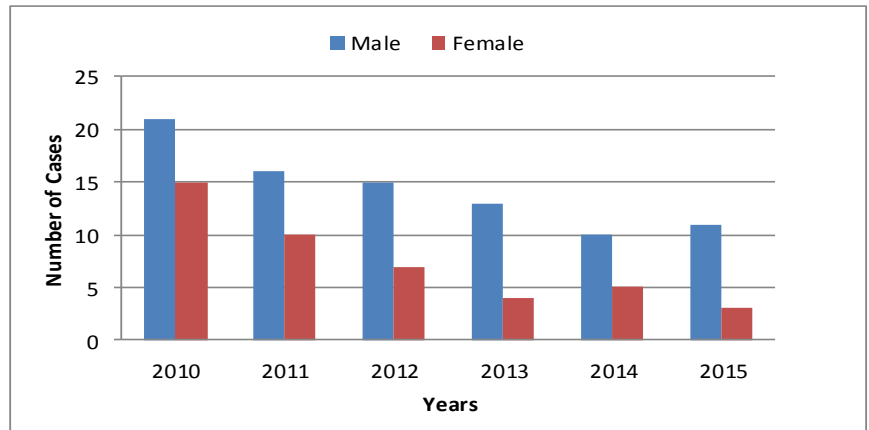
Chronic Hepatitis B virus infection: a long-term illness that occurs when the virus remains in a person’s body. Most people with chronic infection may remain symptom free for as long as 30 years, but some people may experience ongoing symptoms similar to acute infection. Chronic infection may lead to cirrhosis or liver cancer.

Individuals with chronic Hepatitis B should be monitored by a physician for signs of liver disease. Some chronic patients may be treated with antiviral medications to help fight the virus and slow its ability to damage the liver. While antiviral medications are the best therapy known for chronic Hepatitis B, they don't work in all individuals with the disease. A liver transplant may be required if a person has severe liver damage.

Table 2. Number of cases and age distribution of acute Hepatitis B cases, Fulton County 2010– 2015.

	2010	2011	2012	2013	2014	2015	Total
Cases	36	26	22	17	15	14	130
Age (Years)							
range	21-65	27-81	22-60	21-56	22-69	22-68	21-81
mean	41.69	40.15	40.50	38.12	39.27	37.29	39.50

Graph 2. Acute Hepatitis B cases by gender, Fulton County 2010 - 2015.



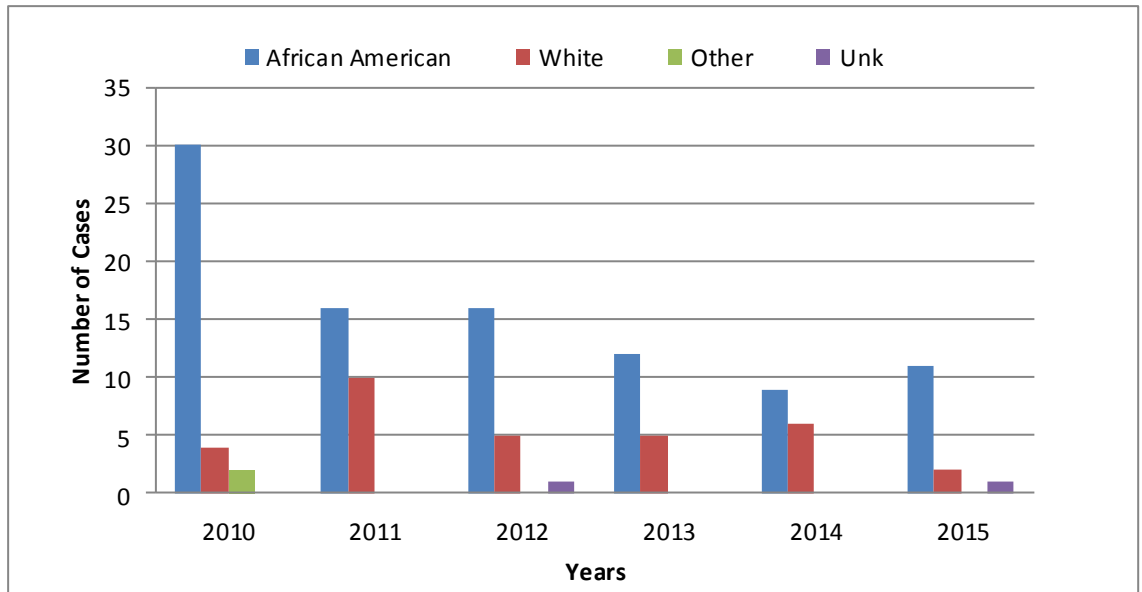
- **Transmission:** Hepatitis B is spread through blood and body fluids. This can happen through sexual contact with an infected person or sharing needles, syringes, or other drug-injection equipment. Hepatitis B can also be passed from an infected mother to her baby at birth and by sharing personal items such as razors or toothbrushes with an infected person.

- **Risk Factors:** Anyone can get Hepatitis B; however, certain individuals are at increased risk. These include individuals who have sex with infected partners, infants born to infected mothers, men who have sex with men, injection drug users and household contacts of HBV infected persons.

- **Prevention:** The best way to prevent Hepatitis B is by getting the Hepatitis B vaccine. Practice safe sex, especially if you have multiple sexual partners. Do not share personal items such as razors or toothbrushes with anyone. Avoid injection drug use. Take precautions when handling needles and sharps.

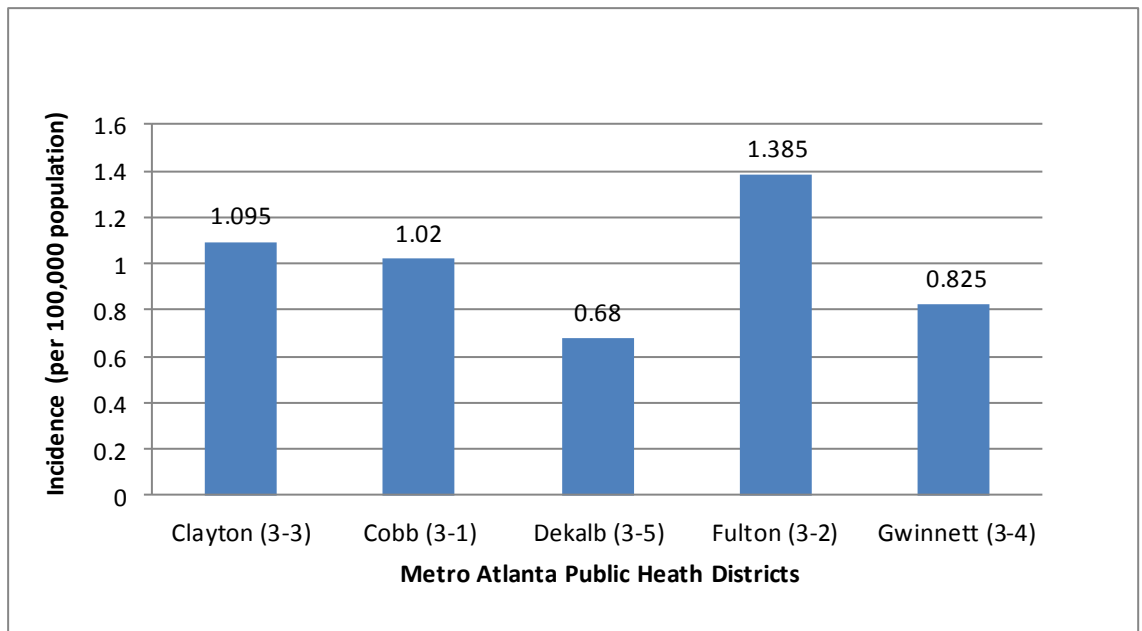
HEPATITIS B

Graph 3. Acute Hepatitis B cases by race, Fulton County 2010—2015.



African Americans are more highly impacted by Hepatitis B than whites in Fulton

Graph 5. 2015 Acute Hepatitis B rates by Metro Atlanta Public Health Districts.



Fulton County has the highest rate of acute Hepatitis B.

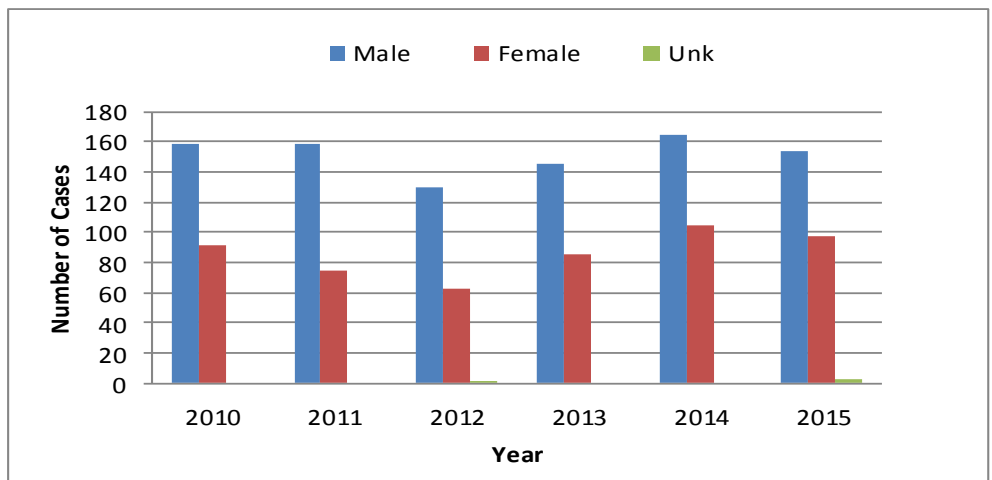
HBV is 50 – 100 times more infectious than HIV and can be passed through the exchange of body fluids, such as semen, vaginal fluids, and blood.

HEPATITIS B

Table 4. Number of individuals identified as having chronic Hepatitis B and the age distribution, Fulton County 2010—2015.

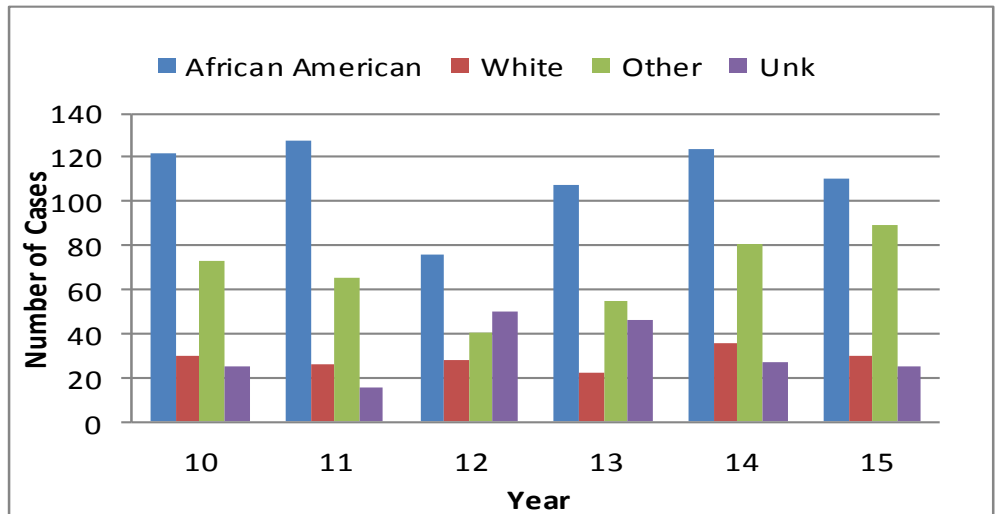
	2010	2011	2012	2013	2014	2015	Total
Cases	253	235	197	232	270	256	1443
Age (Years)							
range	15-90	(9-85)	(5-87)	19-92	17-79	19-91	(5-92)
mean	42.15	42.07	41.24	42.84	43.47	43.64	42.57

Graph 6. Chronic Hepatitis B cases by gender, Fulton County 2010—2015.



Males consistently outnumber females in cases reported per year. This may be related to higher risk behavior exhibited by men.

Graph 7. Chronic Hepatitis B cases by race, Fulton County 2010—2015.



The highest number of reported chronic cases, where race is known, were among blacks.

Anyone can get Hepatitis B! The best way to prevent Hepatitis B is by getting the Hepatitis B vaccine.

HEPATITIS B

Hepatitis B virus can be passed from an infected mother to her baby at birth.

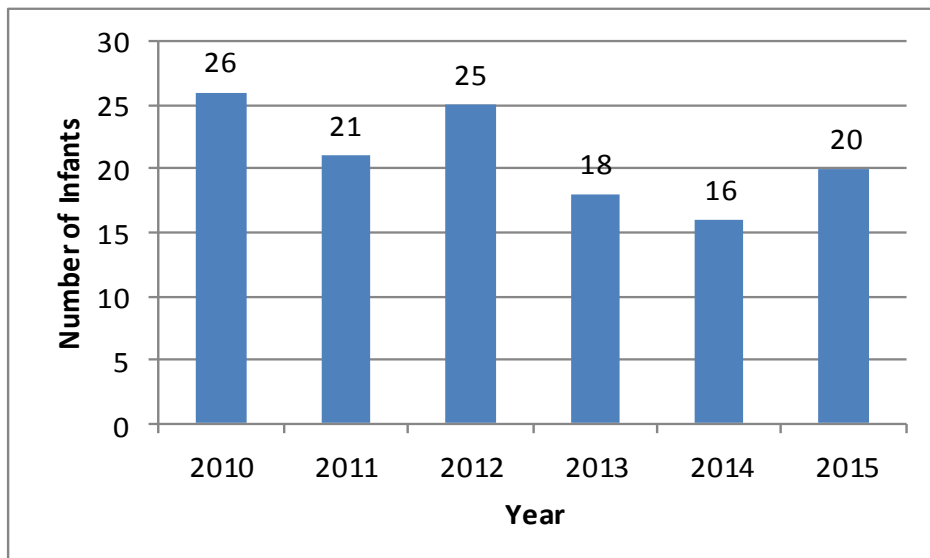
PERINATAL HEPATITIS B PROGRAM

The Fulton County Perinatal Hepatitis B program strives to prevent Hepatitis B virus transmission from mothers to infants. This program coordinates administration of Hepatitis B immunoglobulin (HBIG) and the initial/first Hepatitis B vaccine dose within 12 hours after birth to infants born to mothers who have Hepatitis B. The children are followed for two years to ensure completion of 3-dose vaccine series.

When a mother is infected with Hepatitis B, her baby is exposed to the virus through blood at the time of birth. If the baby does not receive HBIG and the first dose of Hepatitis B vaccine soon after birth, the baby has a 70% - 90% risk of getting infected with Hepatitis B and becoming a chronic carrier. Also, because this baby would be at risk of Hepatitis B infection, the rest of the vaccine series needs to be taken by age six to seven months. Hepatitis B vaccine and HBIG administered 12-24 hours after birth, followed by completion of a 3-dose vaccine series, has been demonstrated to be 85% - 95% effective in preventing acute and chronic Hepatitis B virus infection in infants born to women who are infected with Hepatitis B.

All pregnant women should get tested for Hepatitis B. If the woman is positive for Hepatitis B, she should inform her delivering doctor of her infection status to ensure that her baby receives HBIG and Hepatitis B vaccine soon after birth. Sometimes neither the delivering hospital nor the pregnant woman knows the Hepatitis B infection status; therefore, it is important for all babies to receive Hepatitis B vaccine in the hospital, preferably within 12 hours.

Graph 8. Number of infants born to mothers infected with Hepatitis B virus, Fulton County 2010—2015.



HEPATITIS C

- **Cause:** Hepatitis C virus (HCV)
- **Illness and Treatment:** Hepatitis C is a contagious liver disease that results from infection with the Hepatitis C virus. Symptoms for Hepatitis C can range from mild to severe, and include fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored stool, joint pain and jaundice. Hepatitis C can be either “acute” or “chronic.”

Acute Hepatitis C virus infection: a short-term illness that occurs within the first 6 months after someone is exposed to the Hepatitis C virus. Approximately 70%-80% of people with acute Hepatitis C do not have any symptoms. Symptoms, if they occur, would usually appear 6–7 weeks after exposure, but this can range from 2 weeks to 6 months. Approximately 75%-85% of acutely infected persons will develop chronic infection.

Chronic Hepatitis C infection: a serious disease than can result in long-term health problems, including liver damage, liver failure, liver cancer, and even death. Most people with chronic infection may remain symptom-free for as long as 30 years.

Individuals with chronic Hepatitis C should be monitored by a physician for signs of liver disease. Some chronic patients may be treated with antiviral medications to help fight the virus and slow its ability to damage the liver. While antiviral medications are the best therapy known for chronic Hepatitis C, they do not work in all individuals with the disease. A liver transplant may be required if a person has severe liver damage.

• **Transmission:** Hepatitis C is spread primarily through blood and blood products. Most people become infected with the virus by sharing needles or other equipment to inject drugs. Other ways Hepatitis C can be transmitted is by an infected mother to her children, sexual contact with a an infected person and sharing personal care items, e.g., razors or toothbrushes, which may have come in contact with the blood of an infected person.

• **Risk Factors:** Injection drug users are at the highest risk for Hepatitis C. HIV-infected persons, children born to mothers infected with Hepatitis C virus, persons who have body piercing or tattoos done with non-sterile instruments, hemodialysis patients, and recipients of blood or organ from a donor who tested positive for Hepatitis C virus are also at increased risk for Hepatitis C infection.

• **Prevention:** There is no vaccine for Hepatitis C. The best way to prevent Hepatitis C is by avoiding behaviors that can spread the disease, especially injection drug use.

According to the CDC, of every 100 people infected with the Hepatitis C virus,

- ♦ **about 75–85 people will develop chronic Hepatitis C virus infection; of those,**
 - ♦ **60–70 people will go on to develop chronic liver disease**
 - ♦ **5–20 people will go on to develop cirrhosis over a period of 20–30 years**
 - ♦ **1–5 people will die from cirrhosis or liver cancer**

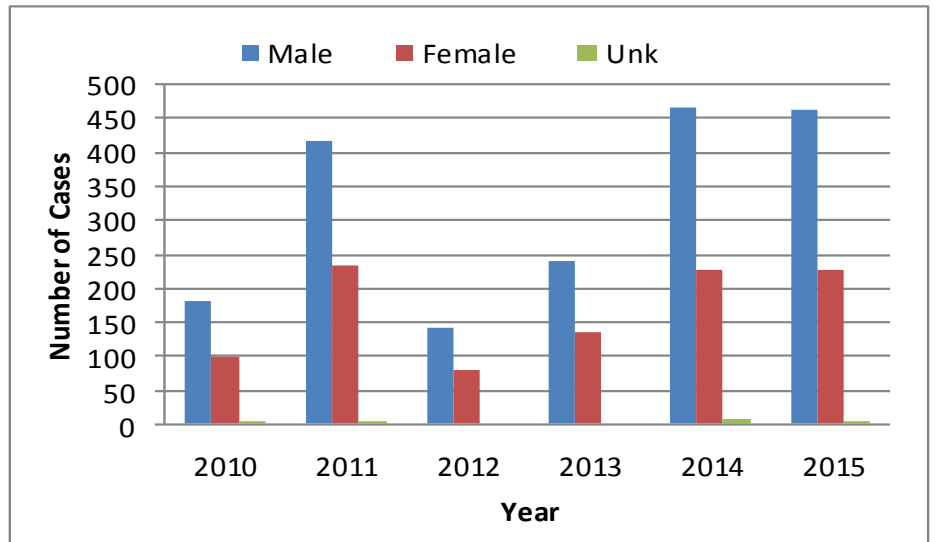
Table 5. Number and age distribution of individuals reported as ever having exposure to Hepatitis C virus in their lifetime, Fulton County 2010–2015. According to the CDC estimates, 75%-85% of these individuals are likely to be living with chronic Hepatitis C infection.

	2010	2011	2012	2013	2014	2015	Total
Cases	319	709	322	418	741	732	3241
Age (Years)							
range	14-83	0-91	(6-83)	16-85	0-90	(2-82)	0-91
mean	53.29	53.32	51.69	53.13	53.71	52.35	52.92

HEPATITIS C

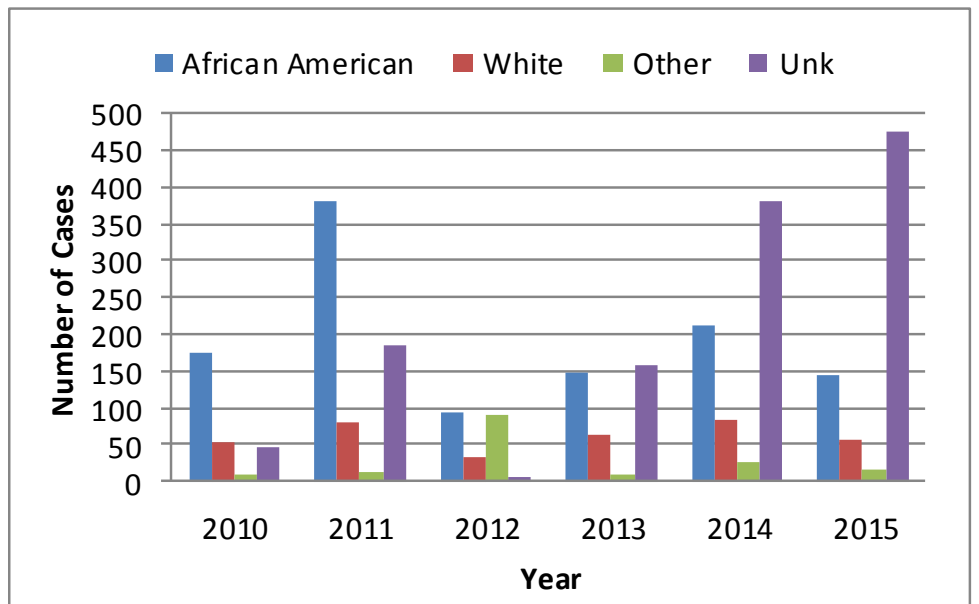
50%–90% of HIV-infected persons who use injection drugs are also infected with the Hepatitis C virus.

Graph 9. Number of individuals reported as ever having exposure to Hepatitis C infection in their lifetime by gender, Fulton County 2010–2015.



Males consistently outnumber females in cases reported per year. This may be related to higher risk behavior exhibited by men.

Graph 10. Number of individuals reported as ever having exposure to Hepatitis C infection in their lifetime by race, Fulton County 2010–2015.



The highest number of reported Hepatitis C cases, where race is known, are among African American.

Hepatitis C is the leading cause of cirrhosis and liver cancer and the most common reason for liver transplantation in the United States.

References:

1. American Academy of Pediatrics. Hepatitis A, Hepatitis B and Hepatitis C. In: Pickering LK, Baker CJ, Long SS, McMillan JA, eds. *Red Book: 2006 Report of the Committee on Infectious Diseases*. 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006: 326-359
2. Center for Disease Control and Prevention, Division of Viral Hepatitis.
3. Mercedes, Lynne. (2008) Hepatitis B Protection from Birth to Adulthood.” *Parent Pages*. Retrieved from <http://www.choa.org/Menus/Documents/Wellness/ParentPages_VOLI_2008_final.pdf>
4. State Electronic Notifiable Disease Surveillance System (SENDSS).
5. U.S. Census Bureau.

For more information on viral hepatitis, please visit:

Center for Disease Control and Prevention: <<https://www.cdc.gov/hepatitis/>>

Georgia Department of Community Health: <<http://dph.georgia.gov/viral-hepatitis/>>

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*Report developed using data available as of January 23, 2017.